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ANTHRAX SEPTICEMIA FROM ACCIDENTAL INOCULATION OF SHAVING WOUND.

By Robert W. Angevine, M.D., Rochester, N. Y.,
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[From the Surgical Service of the Rochester General Hospital.]

An instance of anthrax bacteremia with fatal termination apparently caused by accidental inoculation from an infected shaving brush, or possibly from a woolen blanket containing the anthrax spores, was recently observed in the surgical ward of the hospital. The virulence of the organism present is attested by the fact that death ensued four days after the date of infection and that pathological findings showed the presence of a general septicemia, allowing the identification and culture of the organism from blood and spinal fluid.

The United States Public Health Report[1] discusses recently reported cases of anthrax infection, and states that malignant pustule following accidental cutting of the face or neck while shaving has been noted increasingly often of late, and sufficiently so to indicate the possibility of a widespread distribution of infected shaving brushes. Back of this, the increasing incidence of this form of the disease indicates a letting down of the bars previously placed against raw materials from certain regions used in making brushes and material heretofore rejected because of the frequency of the development of anthrax after their use. Now, possibly on account of war stringency, this material appears to have come into use in the making of the cheaper brushes. Recently three similar cases were reported at Camp Hancock, Georgia.[2]

A robust male of 24 years and of American birth entered the hospital at 6.45 o'clock one evening, having been referred to the house for treatment of an infection showing quite inconspicuously on the left cheek. The patient had not been engaged in any of the so-called dangerous trades, but had been a student of engineering. He told the story of having shaved that morning and of having accidentally cut himself. A new brush had been used. The patient paid no particular attention to the slight wound during the day, but redness and swelling gradually developed, and the patient presented himself for treatment that evening, a rather pronounced temperature having developed.

On the evening of entrance a small incised wound about one centimeter in length was described as having been present in the skin of the cheek about one-half inch above the jaw and about half way between the angle of the jaw and the point of the chin. A lesion, papular in form, had developed at a point along this incision and was surrounded by an areola of swelling. That night the entire left cheek was somewhat swollen, the enlargement reaching from the outer canthus of the left eye to the line of the jaw. Warmth was evident, but induration was slight or absent. The area was tender to palpation. Pulse, temperature and respirations were recorded as 88, 102.2, and 20. Ice was applied to the cheek.

The following day the lesion appeared as a small, brownish maculo-papule somewhat less than a centimeter in diameter. The lesion became vesicular, the thin wall retaining blood-stained fluid. Induration was more definite than on the previous day; tenderness was acute but pain was not a symptom. The patient was prostrated and nausea and vomiting were twice noted in the records. On the third day of the clinical course the lesion was noted as having broken down and presented a depressed crater-like center. In the depressed area was a newly-formed unorganized crust, surrounding a definite black eschar. About the carbon-like material was a ring of tissue of a bluish tinge. About this was a zone of redness, swelling and definite induration. Oedematous tissue extended for eight or nine centimeters in each direction about the central focus.

The patient complained of "aching all over the body," but not of pain in face. Flaxseed poultices were applied to the area of swelling and morphine was administered to combat restlessness and induce sleep. There was vomiting during the night and, on waking, the patient complained of intense headache. Pulse, temperature and respirations were taken as 96, 103.2 and 26, respectively.

On the fourth day the lesion showed a large area of eschar; the swelling and induration and surrounding oedema were more marked and the enlargement of adjacent lymph-glands was very evident. The pulse was 110, temperature, 104.5, and respirations 40. The swelling had extended so that the left eye was entirely closed and face and neck were oedematous. Palpation of the cheek showed that the induration involved the entire thickness of the soft tissues. The patient was able to open his mouth just enough to admit the tip of the finger. The temperature rose to 105, sweating was profuse and chills frequent. During the afternoon the patient showed signs of irritation of the base of the brain and lapsed into unconsciousness. These symptoms increased in intensity, orthotonus developed and the patient died at 7.45 that evening.

A white count taken on the day after entrance gave a leucocytosis of 31,600 per cu. mm. The differential showed: Polymorphonuclear leucocytes, 82%; lymphocytes, 14%; mononuclear leucocytes, 2%; transitional cells, 2%.

The urine was negative. Culture from the cheek lesion taken on the second day gave a small diplococcus, a large diplococcus, a short diplobacillus and b. anthracis. Blood culture was positive for the organism on the third day. Lumbar puncture taken that day showed the presence, morphologically, of anthrax organisms in large numbers. Samples of the blood injected into the lymph sac of a rabbit proved fatal in 36 hours, whereas it was pathogenic for the guinea-pig in 24 hours. Examination of the rabbit and guinea-pig after death showed a purulent exudate in the peritoneal cavity, and the presence of the specific bacillus. The organism from beneath the gangrenous eschar was smeared and found to be gram-positive, occurred in short chains and average size was given as 1 by 6 microns. No spores were noted in the smears. The cultures from the blood gave typical appearances morphologically, and culturally the growth gave the Medusa-head appearance on agar. Spores were noted in the culture.

REFERENCES.

[1] United States Public Health Report, June 12, 1918.
[2] Jour. A. M. A., Oct. 5, 1918, p. 1133.

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SOME NOTES ON OUR EXPERIENCE DURING THE PRESENT "SPANISH" INFLUENZA EPIDEMIC.

By Philippe Sainte-Marie, M.D., Sorel, P. Q., Canada.

Our experience covers 800 cases, a great part of these being attended to as chief internist of a large emergency hospital of Montreal, Canada. In nearly all we found mouth acidity and inflammation of some kind of the gums, alveoli or teeth (at roots). The majority of patients were affected with a confirmed pyorrhea. Impairment of mastication and a complete lack of salivation were the characteristic digestive symptoms noted.

This fact opens the light on that very simple rule of physiology: digestion of amylaceous substances is mostly done by the juices of the mouth glands, saliva. We believe that the proper diet must be dependent upon the proper salivation, and that not enough care is taken in making people notice the importance of this function at the right point of digestive equilibrium.

In most cases, the coloration of the throat gave the note of the prognosis. It ran from the red violet to the rose in mild cases. The cure generally corresponded to the rose color. The persistence of the dark red coloration of the first three days usually meant a severe case of disagreeable symptoms and thoracic complications.

A wash for the mouth, teeth or nose composed of thymol solution (saturated) mixed with one to three, four, five, or six parts of water gave good results if used with caution. The most effective curative and preventive that we used was camphorated oil taken internally, whether by mouth, by nose, on sugar, or in capsules, in doses varying from 7 to 180 drops intramuscularly. The mouth wash and the camphorated oil, used conjointly in five-drop doses and taken at four-hour intervals during the epidemic, prevented many from having influenza. Antiseptic treatment of the bowels was another measure practised successfully.

Two cases of meningitis, together with pneumonia complications, unconsciousness, acidosis, and a degree of sensibility irritating quiescent nerves, were relieved by injection into the spinal canal of a solution of spirits of camphor diluted *secundum artem* to $^1/_{20}$ of camphor and ½ strength of alcohol. These two cases were cured after 20 days' care at the hospital.

The 10 c.c. intramuscular injection of camphorated oil saved many who became cyanosed with temperature 104° F., pulse 110 to 130, unconscious, and dying. The injections, repeated every six to eight hours, according to indications, and sometimes varying in strength, proved very efficacious.

We learned that the pneumococcus was influenced by the gum camphor, and having used it successfully in our previous experience, we did not hesitate to employ it and did so with success. The use of camphor to sustain and increase resistance against influenza was not surpassed in effectiveness even by strychnine, which we also gave judiciously.

The epidemic taught us the importance of salivation, as none of the patients put on a diet without any amylaceous substances and fats during the fever period developed complications after they entered the hospital. We had no intestinal troubles. The patients continuing to take care of their teeth and of their salivation cured themselves permanently of what they called "old dyspepsia."

The best anti-acids employed were magnesium oxide, bicarbonate of soda, and bacillus bulgaricus tablets. We had no nephritis complications, either actual or consecutive.

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AN INTERESTING UROLOGICAL CASE.

By N. Finkelstein, M.D., Pittsfield, Mass.

A man, aged 32, of Russian birth, travelling salesman, consulted me July 5, 1917, about an attack of sharp colicky pain in his left loin which had lasted about five hours. He gave a history of two similar attacks during the past three years, each one lasting about two hours, relieved by morphine. He also complained of the following symptoms, which began about eight months ago—headache, dizziness, nausea, constipation, flatulence, frequency of urination without burning or pain. His venereal history consists of a gonorrheal infection four years ago which cleared up in five weeks.

Physical examination.—Patient appeared to be in great pain, temperature, 99; pulse, 90; respiration, 22; blood pressure, systolic, 120; diastolic, 80; pupils equal and react, tongue coated, teeth in good condition, throat normal, heart and lungs negative. Abdomen—marked tenderness on left side with some spasm of left rectus, marked tenderness in left costo-vertebral angle, kidneys not palpable. Urine very turbid, acid, spec. grav., 1020; albumen, a trace; no sugar, no acetone; sediment shows a great deal of pus, many red blood cells, no casts. Cystoscopic examination—trigone congested and edematous, right ureteral orifice normal, left orifice dilated with plug of pus projecting; vesical mucous membrane shows moderate degree of cystitis. Left ureter catheterized, plug of pus dislodged, gush of bloody urine followed withdrawal of catheter with complete relief to the patient. Catheter again passed into left ureter, pelvis entered without any difficulty and obtained urine containing blood and pus; wax tipped catheter negative for stone.

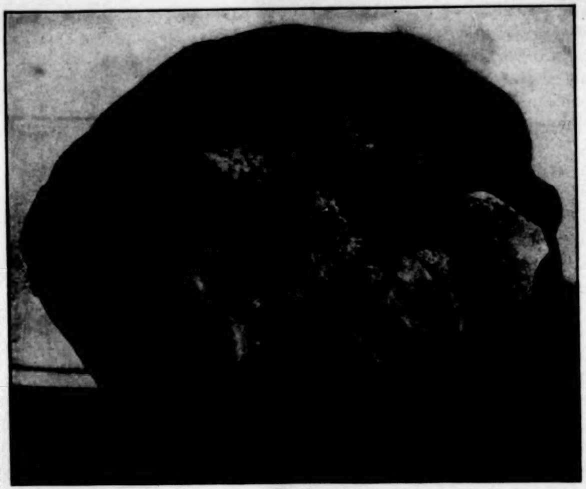

FIG. 1.

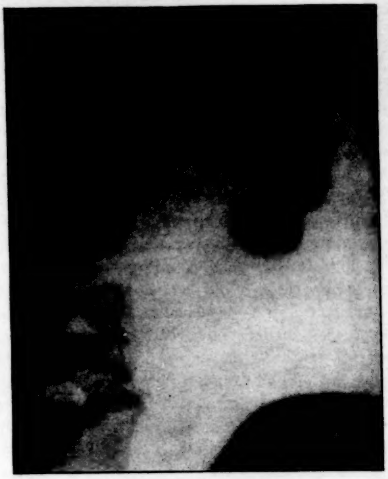

FIG. 2.

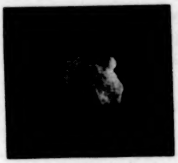

FIG. 3.

I cystoscoped him three days later, catheterized both ureters and obtained normal urine from the left side, turbid urine from the right side. Phthalein intravenously returned in four minutes from left side, six minutes from right; total output at end of 45 minutes, left side, 35%; right, 20%;

Patient returned December 15, 1917, still complaining of same symptoms, no further attacks of pain in left side. Cystoscopic examination—normal urine obtained from left kidney, purulent from right; phthalein test same as before. Radiograph of both sides of urinary tract—large branching shadow in region of right kidney (Fig. 2), left side, negative. Diagnosis—large branching calculus of right kidney with pyelo-nephritis.

Operation, January 5, 1918.—Oblique lumbar incision; kidney delivered; somewhat enlarged; filled with stone. Owing to the enormous size of the stone I removed kidney. The accompanying photograph (Fig. 1) shows the kidney and stone *in situ*, also dilated calyces filled with gravel and small stones. Patient made an uneventful recovery, left hospital in 15 days. With the exception of a little dizziness he was well until July 18, 1918.

On this date, at 6 A.M., patient was seized with violent attack of pain in left loin, which lasted about twelve hours, accompanied by persistent vomiting and hiccough. Complete anuria for the next thirty-six hours. Catheterization of ureter showed complete obstruction at uretero-pelvic junction. Patient growing gradually worse, semi-comatose, pulse rapid bounding and irregular. Diagnosis—Calculous anuria.

Operation July 19.—Oblique lumbar incision; kidney delivered; found to be more than twice normal size; greatly engorged; pelvis small and empty. Stone impacted at the uretero-pelvic junction was pushed up into the pelvis. Pelvis opened and a stone the size of a large bean (Fig. 3) removed. Kidney decapsulated and cortex incised in three different places to relieve pressure. Kidney replaced, pelvis left open with drainage down to it. Patient voided nine pints of urine the first twenty-four hours after the operation. Drainage removed at the end of the fourth day; no leakage of urine after the sixth day. Recovery uneventful and patient left hospital in sixteen days. Still complained of a little dizziness when last seen, December 15, 1918; otherwise well.

Selected Papers.

AN OPERATION FOR BONY OCCLUSION OF THE POSTERIOR NARES.*

By Leon E. White, M.D., Boston.

The bane of operations for bony occlusions of the posterior nares has been the difficulty of obtaining a permanent opening. The cases are so rare that the operator sees only one or two in a lifetime so that he has small opportunity for observing the results of the different methods of operative procedure. Bony atresia of the posterior nares has been recognized for nearly a century, Otto in 1830 being the first to describe this condition, although he had observed it only in a human foetus. The first actual case in the living was reported by Emmert in 1851.

In 1886 Hubbell gave a brief résumé of the cases reported in medical literature, together with one of his own. These numbered seventeen and had been operated upon by various methods, the results being by no means satisfactory. Hubbell's case was one of congenital bilateral atresia which he operated upon by a half-inch hand drill. Good sized openings were made but these closed so that a secondary was necessary, after which tubes of blocked tin 10 millimeters in diameter and 5 centimeters long were inserted and worn for six weeks. The final result was good.

Clark in 1898 reviewed the cases reported, twenty in all, and added one of his own. His patient, an undersized girl of eighteen, had an occlusion 9 millimeters thick near the septum and but 2 where it joined the outer nasal wall, this being the reverse of what is usually found. An opening 11 x 13 millimeters was made by an electric trephine. The relief was permanent as the patient was seen by Dr. Clark some ten or twelve years after the operation.

In 1904 Schmegelow gathered from the entire medical literature sixty-one cases of atresia, most of them osseous. Fraser in 1910 gives the number as 108, while Pfingst in 1914 reported the number as considerably over 100. He had a case of bilateral bony occlusion where the operation was done under local anesthesia. A button of bone ⅜ of an inch in diameter and 1-16 of an inch thick was removed from one side by a hand trephine. The operation was so painful that the patient refused to have the other side touched, and when she was examined eight years later only a very small opening was found.

Pfingst is the only writer, with the exception of Katz, I have found who refers to the removal of the posterior end of the septum as the advisable procedure. His interpretation of the Katz method is as follows:—

"Under local anesthesia three or four holes are drilled with the electric drill and these connected by saw or punch. When the obstruction is anterior to the posterior edge of the vomer, the free or posterior end is removed, thereby creating a larger opening."

A glance through the standard American text books from 1893 to 1917 reveals a rather scanty source of information, but interesting inasmuch as it shows a growing comprehension of the subject.

In Burnett's System, published in 1893, Seiler says that:

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* Presented as a Candidate's Thesis for membership in The American Laryngological, Rhinological and Otological Society, and read at Atlantic City, May 30, 1918. Reprinted from the *Laryngoscope*, August, 1918.

> "Congenital synechia in the shape of a bony bridge across the posterior nares is sometimes met with but is of exceedingly rare occurrence."

In 1899 Roe (DeSchweinitz & Randall) says that bony occlusions of the posterior nares

> "Should be removed with either a drill or bone cutting forceps. Great care must be exercised for the position of the bony formation frequently renders the operation extremely hazardous."

Shurly, in the 1900 edition, writes that:

> "Posterior atresia, if bony, is best relieved by the use of a very narrow chisel, or, in favorable cases, the drill, followed by the insertion of plugs to keep the surfaces apart."

Cradle in 1902, in speaking of this operation, says:—

> "Operations on bony plates closing the choana are more difficult (than the membranous ones). They are painful and bloody. The posterior wall of the pharynx must be guarded by the surgeon's fingers or still better by a suitable bent plate introduced through the mouth. The diaphragm can be pierced by a stilet and the opening enlarged by the saw or chisel. It is much better to make a large opening at once than to attempt to enlarge it subsequently by any mechanical means. Sometimes a tube must be worn for weeks. Among the recorded operations, some of them of recent date, there have been various accidents, such as middle ear infection and even an occasional death."

In Bosworth Edition of 1893 and in Kyle 1899, I was unable to find any reference to this condition, which was also true of Coakley 1901, of Ballinger 1908, and Wright and Smith 1914.

Loeb, 1917, says that:

> "Bony occlusion of the posterior nares, unilateral or bilateral, may be relieved by removing the bony mass by means of chisels or burrs driven by a dental engine. After the opening is made, it may be enlarged by cutting forceps. Some operators remove the bony occlusion through a submucous resection but there is no advantage in this procedure and the difficulties of the operation are greatly increased."

This submucous resection method, however, is given the preference by most of the later writers. Thus, Richardson, who has given us a masterpiece on this subject, says that the method suggested by Uffenorde seems ideal.

> "In this operation the muco-periosteum is raised on the septum down to the obstructing plate, from the anterior surface of which it is gradually separated until its outer border of attachment is reached. The flap is then thrown well outward and the bone plate is removed by chisels and conchotomes. After the bone partition is thoroughly removed, the flap is replaced and an incision is made vertically through the middle of the muco-periosteal flap which covers the nasal surface of the obstructing plate. Expanding forceps are now introduced and the redundant muco-periosteal flap is made to coapt and cover the whole margin of the bone wound."

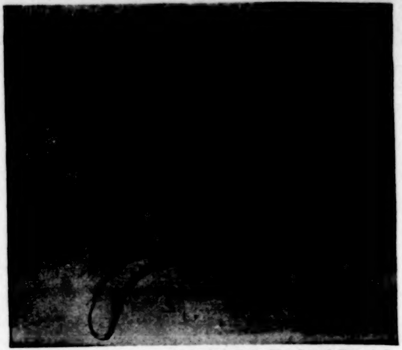

FIG. 1.—Diagrammatic view of nasal septum. The dotted lines indicate the approximate amount of septum to be removed.

As to the frequency of postnasal atresia, while comparatively few cases have been reported (probably not over 150), it is probable that there are many cases in the newborn which are never recognized, the victim passing away in the first few moments of its existence.

Richardson has reported a most instructive case of atresia in an infant, and he well says that:

> "Many cases of this kind of deformity have been in the past, and even at the present time are, unrecognized at birth as such, and when speedily dying, as a result of the obstruction to respiration, are placed under the general class of asphyxia neonatorum."

This same thought had been emphasized by Dr. Clark, who says:

> "This condition is one of such rarity, judging from the literature on the subject, that it at first seems of little practical interest to the physician; and yet there is no doubt that infants may die from the want of knowledge on the part of the family doctor of the possibility of the existence of such an abnormality. . . . Many infants must have died from this condition in whom it was never recognized. And when one considers the serious handicap that such a condition must be to the infant in its

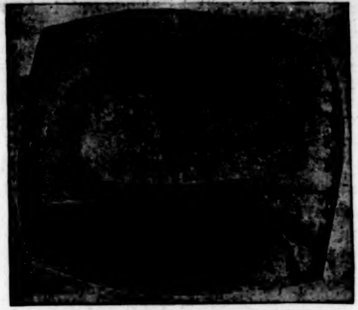

FIG. 2.—Diagrammatic view of posterior nares showing bony obstructions. The triangle indicates first portion to be removed.

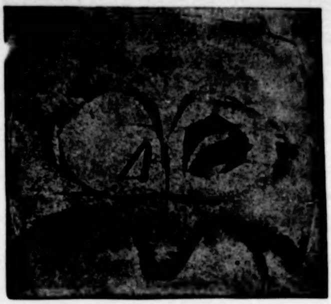

FIG. 3.—Diagrammatic view of removal of one of the bony obstructions, and the first step toward removal of the other.

struggle for existence, I think the greater wonder must be that any such cases have lived to grow up."

Attal also says that when both choanae are involved, the newborn succumb either by asphyxiation or debility due to obstructed breathing and difficulty in nursing. He advises immediate intervention and recommends a gouge and mallet and the use of rubber tubing to keep the passages open.

Koch reported the case of an infant of eleven months, who had purulent rhinitis involving the accessory sinuses so that it was most urgent that nasal respiration and drainage should be established. The osseous obstruction was removed, first on one side, then three weeks later on the other. There was complete cure in six weeks with great improvement in the general health.

Goez likewise operated on an infant for double bony atresia. The bone was thin and a trephine was used. A secondary operation was necessary and celluloid bougies were used once a week.

Heredity does not seem to be an important factor in this type of deformity. Some writers mention that other members of the family had nasal obstruction, but do not see the cases so as to make a definite diagnosis. Lang, however, cites several cases of choanal atresia extending through three generations of the same family, but Richardson takes him to task for his deductions, saying that "Lang attempts to prove the hereditary nature of this disturbance without any facts to substantiate his contention." "Lang saw," he says, "several cases in the one family, and even went so far as to include a deceased child whom he had never seen and from this occurrence deduced the hereditary nature of the deformity."

As to the pathogenesis of congenital atresia various theories have been advanced. Lushka and Schwendt believe the condition is due to a proliferation upward and backward of the horizontal plate of the palate bone. Kahler and Kundrat regard it as due to an overgrowth and extension inward of the vertical plates of the palate bone and mention the fact that the lateral part of the occlusion is usually thicker than the median. This condition was marked in my first case but not in the second. Hopmann thinks that originally there existed a high degree of choanal stenosis which, with extreme deviation of the vomer and approximation of the internal pterygoid process of the sphenoid, eventuates in complete occlusion. Bitot differs from all these and claims the obstruction is an independent bone as indicated by its sutures.

That the condition might be due to some embryonal activity or the reverse has been

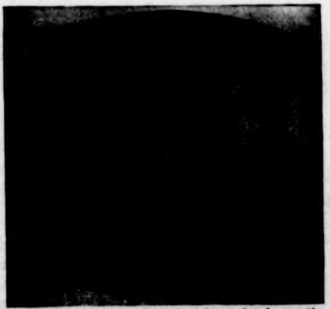

FIG. 4.—Diagrammatic view of results of completed operation after removal of the bony obstructions and the posterior end of septum.

likewise discussed, and the usual different theories advanced. The most plausible explanation is that given by Hochstetter, Tiemann, and Keibel who maintain that the primitive nasal cavities are from the first separated from the mouth and pharynx and form a blind cul-de-sac. The floor of these primitive nasal cavities is formed by the union of the lateral with the mesial nasal process, and is made more solid by the proliferation of the mesoderm between the two epithelial layers. The posterior part, however, continues as an epithelial layer and, as the nasal cavities elongate, ultimately reaches the naso-buccal membrane which finally gives way. In cases of atresia it is possible that the naso-buccal membrane becomes permeated by mesoderm and therefore fails to break down.

Choanal atresias have been divided into two classes:—

1. Those where the posterior end of the vomer extends beyond the atresia. These have been called by Schwendt the typical cases; and

2. Those where the obstruction is on the same plane as the posterior end of the vomer or the atypical, under which heading both of my cases are classed.

The following is Hochheim's report of the histological examination of a specimen of bony atresia:—

"In structure (the bone) corresponded to the hard palate. It consisted as the hard palate of the centrally placed plate of bone, which on the one surface was lined with muco-periosteum corresponding to the nasal cavity, and on the other of the muco-periosteum corresponding to the postnasal cavity modified in the respect that in this are found mucous glands, and the epithelia are columnar instead of the flat epithelia."

Two specimens of choanal atresia have been obtained and studied by Hamilton and Fraser. Hamilton's specimen came from a patient who died of pulmonary tuberculosis. "After maceration it presented," says Hamilton, "the following appearance:—

"The bony septum is quite straight. . . . Both choanae are occluded by bony plates, in each case diaphanous in the central part, their attachments being: the anterior, as far forward as the junction of the superior maxillar and the palate bones; their lateral, on the outer side, to the internal wings of the pterygoids; on the inner, to the posterior margins of the vomer, and their superior and posterior, to the basilar process of the occipital bone; the septum projects at its base behind the plane of the plates, which latter, it will be thus seen, instead of being perpendicular, pass from above and behind downwards, forwards, almost approaching the horizontal."

Fraser's specimen came from a case of unilateral atresia that died from leptomeningitis from an old o.m.s.ch. He discussed his findings as they coincided or differed from the various theories advanced to explain this abnormality. As his case showed marked asymmetry of the hard palate, he cites the two theories advanced to explain the effect of mouth breathing on the shape of the palate.

"Siebenmann, Frankel, Grossheintz, Hagg, and Buser take the view that a high palate is only part of a congenitally high and narrow formation of the facial skeleton," while "Bloch, Körner, Waldow, Alkan, and Bentzen are of the opinion that mouth breathing produces an abnormally high palate on account of the pressure of the stretched cheeks on the lateral part of the alveolar arch, and also because of the want of counter pressure of the tongue on the roof of the mouth."

After a failure in my first operation, which I felt I had done thoroughly, following Uffenorde's method as nearly as possible, it occurred to me that if the raw surfaces were farther apart, the danger of closure would be greatly lessened; and remembering, also, that perforations in the septum usually stay open, it seemed to me that the logical thing to do would be to make a perforation in the posterior end of the septum involving the obstructing choana.

As far as I have been able to find by searching the literature, no cases have been reported where this method was followed. I thought the idea was original but find that Katz speaks of it as follows:—

"Lateralwarts gelangt man dabei nicht soweit infolge der räumlichen Behinderung durch die vorliegenden Teile, besonders durch die Muscheln; dagegen wurde medialwärts im grossen Umfange reseziert und vor allem vom hinteren Vomerrande alles Erreichbare entfernt."

"Wer eine hinreichend grosse Öffnung angelegt und vor allem den hinteren Vommerand ausgiebig reseziert hat, fur den wird sich die Nachbehandlung relativ einfach gestalten."

The posterior nares are formed by the vomer and nasal crest of the palate bone internally, the sphenoids above, the horizontal plate of the palate below and the pterygoid processes externally.

A fairly generous section is outlined for removal, as it seems better to err here on the side of too great rather than too small an amount. For the operation I have used both local and general anesthesia, but prefer the latter, especially where there is double occlusion. Ether, I feel, should be given a decided preference over chloroform, especially when the operation is done in the upright position. There is an element of danger, and Loeb, who has reported a death from chloroform, advises that "wherever possible, local anesthesia should be employed, as these patients, like others suffering from congenital malformations, do not bear general anesthesia well." Deflection of the septum or hypertrophy of the turbinates should of course be corrected before attacking the atresia, as it is essential to have the best possible operative field. It is hard to see through these noses which are usually small and narrow. After the free use of adrenalin to obtain a bloodless field, the obstructing bony plate can be readily perforated, with a long flat chisel held close to the septum. A triangular section, as outlined, is first removed, the forefinger being placed in the posterior nares to guard against accident. The bone is next punched out as thoroughly as possible and the rough edges smoothed off with a mastoid curet. When the atresia is bilateral the other side is operated on in the same way. The posterior end of the septum is then removed by rongeurs or curet, and after being smoothed off carefully, for it is quite brittle, it is covered by the mucosa which has been previously cut and elevated so as to leave enough for this purpose. All shreds should be carefully removed and the nose wiped clean. Each nostril is then packed with a strip of gauze covered with Cargile membrane or rubber tissue. The packing should be removed in 24 hours, and the subsequent treatment is only such as needed to keep the nose clean and free from crusts. If the operation has been done thoroughly, no further packing is necessary, nor will there be need for the wearing of any of the many devices recommended to keep the opening patulous.

I beg to report the two following cases:—

Case 1. Mr. H—, 50 years of age, a newspaper editor from Prince Edward Island, was referred to me by Dr. Leary of Boston on November 7, 1913. He gave a history of having had obstruction in the right side of his nose as long as he could remember, and of having been examined by many doctors at home, all of whom told him the obstruction could not be removed without endangering his life.

Upon examination I found the right side filled with a large quantity of offensive tenacious mucus. This was constantly drooling from the nose, and while he made continuous use of his handkerchief, he presented a pathetic spectacle. There was a marked deflection of the septum to the obstructed side, and a polypoid degeneration of practically the entire mucosa. The naso-pharyngoscope and rhinoscopic mirror showed complete occlusion of the right choana, the obstruction being on a plane with the posterior end of the septum. There was slight asymmetry of the face and a rather high hard palate; the eminence of the right eustachian tube seemed much nearer the median line than the left, a condition I later noted on digital examination when the patient was under ether. This malposition of the tube has not been noted, so far as I have been able to discover, and may have considerable bearing on the etiology. In order to reach the obstruction it was necessary to resect the anterior half of the septum, and to remove considerable of the degenerated mucous membrane. Under ether an attempt was next made to remove the bony wall across the choana in accordance with the method described by Uffenorde. After elevating the mucosa over the posterior portion of the septum and bony plate and pushing it as far over as possible, an opening was made with a long chisel through the bony atresia close to the septum and a considerable area punched out with a sphenoidal punch. The bone near the septum was thin and easily removed, but outwardly it became very thick and was extremely difficult to get out. An opening about 10 millimeters in diameter was eventually obtained. The mucous membrane was then put back into place and a vertical incision made through the central portion of the section originally covering the obstruction. This was packed tightly against the edges of the bone with iodoform tape. The wound healed well and the patient went home three weeks after the operation. Three months later he returned and I found that the opening had almost entirely closed, so that a second operation was necessary. This was done under local anesthesia. The operation was performed practically as outlined in my description. An area about the size of a dime was removed from the posterior portion of the septum and the nose lightly packed with a 5-inch strip of tape surrounded with Cargile membrane. This was removed in 24 hours, the nose was cleansed daily for ten days, when the patient went home. Eight months later he returned and I was pleased to find that he had a good sized opening through which he was not only able to breathe, but what to him was of far greater importance, to blow the nose. There was no accumulation of mucus, a normal looking mucosa and an improvement in the senses of both smell and taste.

On April 18, 1917, more than three years after the final operation, he wrote me as follows:

> "With reference to the good work you performed on me, it is a perfect job. The right nostril (the operated one) is still better than the left and gives me no trouble. The opening in the back wall is free and clear."

Case 2. Miss H. E.——, age 18, of Lee, Maine, was referred to me by Dr. Way of Lincoln, Maine. She was admitted as a house case at the Massachusetts Charitable Eye and Ear Infirmary on March 31, 1916.

She gave the following verbatim history:—

> "I am nearly 18 years old and I have never been able to breathe through my nose, nor to smell anything at all. I have, from birth, a bony growth in my nose which completely closes that passage between my nose and throat. When I was a few months old my mother took me to Bangor, Maine, and had my nose examined by two different nose and throat specialists but they could not do anything for me. Last summer I went to the Maine General Hospital and all the doctors in the hospital examined my nose and throat. They said that they had never seen a case like mine before and that there was no one in the State of Maine that could perform the operation successfully."

The patient was well developed and seemed rugged; had no sense of smell and taste was poor. The face was symmetrical and although a mouth-breather, the hard palate was not high. The hearing had always been good and both drum membranes were normal. While there was some lack of resonance in her voice, she was able to enunciate plainly; the nose was rather narrow; the septum in the median line and thick at base; the mucous membrane was fairly normal and there was but little excess of secretion, thus differing markedly from the first case. The choanal obstruction could be seen both anteriorly and posteriorly. The vault could be made out and was normal. The eustachian eminences were in their usual position and not unduly prominent as in Case 1. The choanal obstructions appeared as rounding protrusions covered with normal mucous membrane. They seemed to be attached to the posterior end of the septum and not anterior to it.

The operation was performed by me on April 1st, the patient being under ether about 40 minutes. The following report was copied from the Massachusetts Charitable Eye and Ear Infirmary records:—

> "The bony partitions occluding the posterior nares were removed by chisel and biting forceps, part of the posterior portion of the bony septum was also removed thus throwing the posterior nares into one cavity."

A rubber tube was placed in each nostril and a postnasal plug inserted. These were removed in 24 hours and no further packing used. The patient was discharged April 25th, practically well. The subsequent history of the case can best be told in her own words, written seven months later in response to my inquiry:—

> "My nose and throat were sore for a short time after I left the hospital, but when my throat was healed so that I could eat anything that I wished I found that food tasted much better. I can now smell as well as any one, and I can breathe freely through both nostrils. The shape of my nose was changed; it used to be rather soft and shapeless but now it has a much better shape. My lips do not stick out as they used to, and my lower jaw is not dropped down as it was once. I think my memory is better and I enjoyed my walk, to and from school, as I never had enjoyed it before, because I could smell the fragrant spring flowers."

From the foregoing letter it is evident that the senses of taste and smell have been greatly improved and that a considerable change has taken place in her facial expression, as some writers, especially Schrötter, have mentioned. On October 16, 1917, her physician wrote as follows:—

> "Miss H. E.——is breathing through her nose and the operation was entirely successful."

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Society Report.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

(Concluded from page 135.)

WAR AND THE CHILD.

DR. SAMUEL McC. HAMILL: I have worded my subject as it has been announced that you may think of the child as part of the problem of this great war. With 5,000,000 men on the fighting line the casualties in killed and wounded must necessarily be great. With 5,000,000 men taken out of civil life the reduction in death rate will be tremendous. Because of these dangers the President of the United States has pointed out that the conservation of the lives of our children is an essential war measure. We have also experienced a rapid decline in rate of increase in population by the cutting off of immigration, from which source we acquired an increase in 1913 and 1914 respectively of 1,197,892 and 1,218,408. Every warring nation at the end of the first year of war discovered that their neglect of the problem of the civil population meant an enormous increase in infant mortality. It became necessary for government health agencies to maintain the health of children as never before. The response in England was immediate and the infant mortality in 1916 attained the lowest point known in the history of England. Every avenue of education available has been applied to the needs of the various countries. and no period of life has been neglected. Pennsylvania was the first state to include child welfare as a factor in its war program, establishing a Division of Child Welfare in its Committee of Public Safety. There was no countrywide provision for the welfare of the children of the nation until the organization of the Woman's Committee of the Council of National Defense. This committee established a Division of Child Welfare and entered into coöperation with the Children's Bureau, to act as the agent of the Bureau in the organization and direction of child welfare in the various states through the medium of the state divisions of the Woman's Committee. To meet with a full measure of success child welfare work must have the active support of the medical profession. It is given to each of us to sacrifice much that those for whom our heroes die in France may be kept in health through childhood and youth to take their places in the work of the world in the years to come. The fight for the children against ignorance, poverty, crime and intemperance is essentially the doctor's fight.

THE REËDUCATION OF THE INJURED SOLDIER.

MAJOR R. TAIT MCKENZIE: Briefly stated the conditions which must be treated in the wounded soldier are: Injury to the peripheral nerves, scar tissue, post-operative conditions, functional neuroses, conditions variously grouped under the name "shell shock," the "soldier's heart," which is but a symptom of overstrain; debilities. The majority of men filling our war hospitals and convalescent homes must depend for most of their present treatment and for their future efficiency upon the masseuse, the practitioner of electro- and hydrotherapy, the physical instructor, and the teacher of vocational training. The course usually followed begins with preparation by heat, either wet or dry, or produced by electricity, on through the stimulation of nutrition by massage and passive movement, then in simple exercise taken voluntarily, and eventually to skilled movements by gymnastics, games, and handicrafts, and graduating into industrial training. The necessary equipment consists of the galvanic or continuous current, the faradic or alternating current. The high frequency current used in diathermy is useful in producing hyperaemia in deficient circulation and as a preparation for massage or movement. Radiant heat, and hydrotherapy play an important rôle in treatment of the wounded man. A description of the treatment for the various disabilities is given with an enumeration of appliances used in their correction.

THE CARDIOVASCULAR PROBLEM IN THE AVIATION RECRUIT.

Dr. James I. Johnston, Pittsburgh: Those who have had to examine candidates for the aviation corps cannot but be impressed by the quality of the recruit physically and by his splendid spirit in the choice of his service. The greatest apprehension among candidates for all service was fear of refusal. This was particularly true of the aviators. From between eight and nine hundred men examined, about 50 per cent. were passed by us as physically fit, while only 30 per cent. were finally accepted and sent to the U. S. School of Military Aeronautics. The occupations of many of these men were that of college students, travelling salesmen for large corporations, recently athletic college men, and instructors from schools and colleges. In the cardiovascular group numbering about one hundred the analysis was confined entirely to the domain of physical diagnosis. Although these men had already been passed on by an examiner there was the occasional appearance of organic cardiac disease or a thyroid cardia in fine balance. We have learned to agree with McKenzie that murmurs in themselves have little significance. The largest number of murmurs observed were due to thyroid toxemia and were in a state of either fine balance or in unbalance. Our experience did not confirm the observation published a few years ago that murmurs at the mitral area, especially from true valvular lesions, could usually be heard in the left subclavian artery. This was of occasional occurrence only. No man with a constantly systolic pressure above 135 was accepted.

NEW MEDICAL CONDITIONS, AND DEVELOPMENTS IN PREVIOUSLY RECOGNIZED COMPLAINTS, DUE TO WAR EMERGENCY.

Dr. J. M. Anders, Philadelphia: The main object of this paper is to emphasize the increasing importance to the medical profession in America, as hostilities progress, of the new medical developments resulting from the present great struggle. Vincent's angina has shown a greatly increased incidence under military conditions. The writer observed a case complicated with diphtheria in a sailor suffering from pneumonia. Vaccines have proven useful; the immoderate use of tobacco is to be avoided. In connection with the pneumonias, Col. Wm. H. Welch states that the enhanced virulence of the streptococcus is the most important problem in dealing with infections in soldiers in the present war. The mortality rate in empyema due to the streptococcus hemolyticus is not less than 75%, while in the form due to pneumococcus, recovery is the rule. The most approved treatment is aspiration, repeated as necessary, and intrapleural disinfection with Dakin's solution. Prophylactic vaccination against pneumonia with hemolytic streptococcus and pneumococci Types I and II is advised. In the various forms of disordered heart action in soldiers, as Hume points out, the patient must not be permitted to entertain the notion that he has a diseased heart. In the higher incidence of tuberculosis in certain foreign countries the cause in the majority of cases apparently is endogenous, while a considerable percentage may be attributed to primary exogenous infection. According to the noted phthisiologist, Sergent, the most trustworthy physical signs of a lesion of the parenychma of the lung are "dullness, hemoptysis, increased fremitus, 'clicks,' and a veil or shadow at the apices, fixed, not modified by cough, with striae and fly spots on the plate.'' In my view the examiner of recruits should rely quite as much upon a history, presence or absence of fever, the pulse, detection of bacilli in the urine and of antibodies in the blood, as upon the physical signs and x-ray findings. Also tuberculous lesions should be searched for in all other organs of the body than the lungs. The tests to be applied to keep the latent cases of tuberculosis out of military service cannot, in my opinion, be too strait. In epidemic cerebrospinal meningitis, treatment is summarized in early diagnosis and prompt treatment with serum. The treatment of trench nephritis does not differ from that in acute glomerular nephritis in civil life. Concerning trench fever the etiological organism is in the plasma of the blood but is not yet definitely discovered. While the prognosis is good, anemia and disordered action of the heart are apt to follow the severer forms. Treatment is wholly symptomatic. An assured diagnosis demands the exclusion of relapsing fever; this is possible only by microscopic examination of the blood, which shows an absence of the spirochaetae recurrentis. War edema occurs mainly among prisoners of all nationalities who are fed on German rations. Treatment consists of rest in bed and a diet of sufficient protein and at least 100 gms. of fat daily. Of the so-called "Spanish'' influenza, unanimity of opinion upon the bacteriology does not at present exist. While the general opinion is that we are experiencing a pandemic of influenza such as prevailed in 1889-90, this view is to be accepted with caution and reserve.

DISCUSSION.

DR. THOMAS MCCRAE: Dr. Anders' paper draws attention to the presence in the army of problems other than surgical. The cases of disturbed heart action, I fancy, are the bane of every medical man in the Army. Infection here, I think, plays a very small part. This is true also of internal gland secretion. The overwhelming factor is the nervous element. I would emphasize that there is nothing concerned with the disordered heart action as seen in the Army that one does not see in civil life. Dr. Anders suggests the possibility of aggravation by the strain of war; many of the men never get to war. One very big problem is the part played by tobacco. I think it is the consensus of opinion that while tobacco may not have been the original cause of the condition, it plays a large part in aggravating it when once present, and it is a very difficult problem to handle in the Army. When the quantity of tobacco used by a man amounts to 40 cigarettes a day it must be realized that he is taking a drug which poisons him. The question of the proper allowance of tobacco to men with disturbed heart action should be considered. In war nephritis the persistence of the hematuria deserves particular attention. Regarding the question of a certain number of men being sent back from the French front line with a diagnosis of tuberculosis when only a certain proportion had the disease, I think there is no reflection upon the diagnostic ability of the French surgeons. It is to be remembered that all these men had lost weight, the majority had acute bronchitis with bloody sputum; signs were probably present throughout the lungs. To say whether or not they had acute tuberculosis passes the ability of any man up in the front and of the man in the base hospital until he has time to observe them. The question of the gassed patients will probably have to be met after the war. I would like to suggest that next year or the year after most of us will be handling medical conditions the result of the war.

THE FIXED FULL-TIME STAFF IN THE ORGANIZATION OF THE SMALL HOSPITAL.

DR. HAROLD L. FOSS, Danville: The paper presents the advantages of the permanent, salaried staff, particularly in its application to the rural hospital. Salary versus the fee plan is considered, as are also organization of departments, concentration of authority and responsibility. Attention is given to the relationship of such an organization to the general practitioner, the matter of fees and the handling of benevolence. The paper describes the manner in which such a plan is being worked out at the Geisinger Memorial.

SOME BLOOD CHANGES IN RATS ON CANCER-INHIBITING AND CANCER-STIMULATING DIETS.

DR. ELLEN P. CORSON-WHITE, Philadelphia: The paper is a brief study of some blood changes in rats on various diets. The effect of these diets on the blood and on: 1, growth and nutrition of rats; 2, takes, growth energy, and metastases of the experimental tumor; 3, length of life of animal after inoculation. The investigation showed that all diets which gave in normal animals an approximately normal growth curve, grew large tumors with high percentage of takes; all diets which depressed the growth curve, retarded or prevented tumor growth. A study of blood of rats on these diets showed no change in numerical count of red and white cells, but a decrease in number of lymphocytes in all diets stimulating cancer growth, and an increase in all diets which retarded tumor growth. From the work it would appear that cholesterol is a factor which, while of little or no nutritive value, favors tumor growth when conditions favorable to its initiation are present.

PNEUMONIA.

Dr. W. J. K. Kline, Greensburg: To diagnose the case of pneumonia, the trained ear is essential. In treatment it must be remembered that in the inception of the disease there are sudden changes in temperature of the body, closing the pores. Active diaphoresis is therefore indicated. This may be produced by external moisture and heat and an internal remedy to create active succussion of the internal organs, followed by warm potations. A saline cathartic should next be given. In the presence of arterial tension, veratrum viride (Norwood) used to the effective limit will reduce the heart beat to normal. It should rather be forced below the normal and thus maintained until the congested lung tissue can resume normal vascularity and the engorgement is cleared up. With this result the case is tending to recovery. Digitalis may be necessary in weak heart action. Opiates are essential in delirium. The routine use of veratria should, of course, be discouraged, as should such use of all drugs. In pneumonia the object should be to slow down the pulse and give the heart opportunity to work normally. Here the Norwood tincture is the most reliable drug. In the adult it should be used in doses of eight to ten drops every two hours, the dose to be reduced or increased as required to bring the pulse rate down to 80 or 60 beats rapidly until nausea is indicated, when the rate will be lowered. This rate should be maintained for 24 or 48 hours and will be an important factor in clearing up the congestion.

DISCUSSION.

Dr. Charles Rae, York: In the Civil War twice as many people died from disease as from war injuries. In the present war pneumonia has appeared with great significance. In the hemolytic streptococcus pneumonias there is a paucity of progress in treatment. Since the preponderance of cases follow measles, therapeutics should be directed against prevention. We feel warranted in assuming that four types only of the pneumococcus are concerned in the etiology of lobar pneumonia. Much additional light is needed in our understanding of streptococcic pneumonia. Evidence indicates that lobar pneumonia is a contact disease. In treatment, first in importance should be the avoidance of polypharmacy, in the form of drugs or bugs. Early digitalization is probably wise, not for its immediate effects upon the heart, but that the patient may respond quickly to digitalis by the mouth should it be suddenly needed. For the cough and pain, morphine hypodermatically and sufficiently frequently to dull the sensibilities I find most efficient. Turpentine in enemas and stupes is the best means of combating abdominal distention. The serum treatment in Type I infection of lobar pneumonia has probably reduced the mortality to about one-third of the original record. It is not, however, an ideal treatment. In the treatment of streptococcus bronchopneumonia there is little to offer but preventive measures and intelligent care.

Dr. S. Solis-Cohen, Philadelphia: My former feeling that routine mixtures of stock bacteria were useless and unscientific has been completely changed since my observation at Fort Oglethorpe of the work of Majors Smith of Uniontown, Dare and Bergey of Philadelphia, in preparing a vaccine from streptococci, staphylococci, micrococcus catarrhalis and four types of pneumococci and finding that the mortality in patients receiving this was less than six per cent.; that the patients did equally well with those of Type I who were treated with the specific Type I serum of the Rockefeller Institute; and, moreover, did not develop empyemic complications with the same frequency as those treated with the serum.

SOME RECENT RESULTS OF COÖRDINATION OF LABORATORY AND CLINICAL RESEARCHES IN PNEUMONIA.

Dr. S. Solis-Cohen, Philadelphia: The paper embodies a report of results of coördinated research by Drs. Kolmer, Heist, Steinfeld, Weiss, and the author, showing the chemotherapeutic activity of cinchona derivatives against pneumococcus *in vitro* and *in vivo;* the inferiority of optochin to ordinary quinine compounds in human pneumonia; pneumonia poison in the human lung; inhibiting effect of quinine on this and pneumotoxins; Lacy-Heist method of studying immunological power of whole circulating blood. Immunity of certain individuals and birds against pneumonia. Bacterins (vaccination) and quinine mouth washes as preventives.

Dr. David Riesman, Philadelphia: In no disease is the close coöperation of laboratory workers and clinicians more opportune than in pneumonia, which is by all odds the most fatal and most serious infectious disease we have to deal with in this climate. I cannot feel that quinine is a specific in pneumonia. Of serums we have but one which is of value. The problem of pneumonia must be attacked more from the point of prevention than hitherto. From the standpoint of a sanitarian and a physician, one of the most important discoveries is that a healthy carrier may spread the disease.

Dr. George D. Heist, Philadelphia: In our research work we found that the serum of one man who had received five and sometimes ten grains of dihydrobromide every three hours over a period of a number of days killed pneumococci with great regularity after an exposure of 24 hours. In other cases the pneumococci were very decidedly inhibited in their growth. The bactericidal element in the serum was proportionate to the quantity of quinine received by the patient. The dihydrobromide was the most active salt. The serums of recovered patients and of those who received no quinine showed no bactericidal action. Dr. Cohen had long pointed out to us that the patient with pneumonia does not feel the quinine as does one not having the disease. This observation was confirmed to me in our work.

Dr. Cohen, closing: Quinine, so far as I know, has never been put forth as a specific in pneumonia. I would say rather, that midway between the expectant treatment and treatment by serums and bacterins is the definite method of treatment by quinine; quinine in a definite way and for a definite purpose; and in my own experience over many years no other medicinal treatment is equal to it.

LABORATORY METHODS; THEIR VALUE AND PRACTICABILITY IN GENERAL MEDICINE.

Dr. M. Howard Fussell, Philadelphia: The paper is a plea for accurate diagnosis, possible only by history taking, through physical examination, and routine laboratory examinations. The man does not live who can guess at conditions and not sooner or later take a cropper. I would advise the man not educated in the more accurate diagnostic methods to associate with himself a young man to do this routine work for him. A kit with instruments of precision is shown, rendering practicable the making of diagnosis in conditions met every day by the general practitioner.

Dr. Henry Rhea Douglas, Harrisburg: A case illustrating the force of Dr. Fussell's plea is that of a boy of nine treated for years for an eye condition accompanied by anemia and glandular enlargement. Subsequent examination upon the principles urged showed a Wassermann reaction plus four.

Dr. H. W. Mitchell, Warren: Laboratory study practically settles all doubt in diagnosis in a large group of patients admitted to the hospitals for the insane.

Dr. Paul G. Weston, Warren: I would enter a plea for the more frequent use of lumbar puncture for diagnostic purposes. The technic is simple and does not require extraordinary skill. I feel also that the chemical analysis of the blood should accompany urinalyses.

Dr. Charles Rae, York: To be borne in mind in making our diagnosis is the relative unimportance of negative findings. I would emphasize the importance to every man with a large practice of having a trained assistant to do his laboratory work.

SOME DRUG ERUPTIONS.

Dr. M. B. Hartzell, Philadelphia: Drug eruptions are those produced by the ingestion of drugs, or their absorption by the skin or mucous membranes; those arising from contact belong to another category. A very large number of drugs produce eruptions, but relatively few affect all individuals. The same drug does not always produce the same form of eruption. The iodides usually produce an acneform eruption, but may cause more serious conditions; the same is true of the bromides. The hypnotics frequently produce eruptions of varying character; those resulting from the administration of veronal are often accompanied by severe itching and burning; a chronic pruritus may be a symptom of opium addiction. The preparations of arsenic occasionally produce herpes zoster; they cause a variety of keratosis possibly followed by epithelioma. Arsphenamin sometimes causes a violent dermatitis with symptoms of nephritis. In the presence of an unusual form of eruption the possibility of its drug origin should be considered.

Dr. Julius H. Comroe, York: An instance of idiosyncrasy to drugs given me by Dr. B. A. Thomas is that of the administration of 270 grains of potassium iodide three times a day in ascending doses for almost three months without producing the least suggestion of a rash. In another case the administration of three grains developed a most intense rash. Rather than advise routine ascending doses it would seem better practice to treat each case as an individual entity, and upon the slightest evidence of a rash, either diminish or interrupt the dose; also by giving more attention to the emunctories during the administration of bromides, iodides, etc., we would be meeting in a better way the prophylactic requirements of the problem.

THE PLACE OF THE MEDICAL INSPECTOR IN PREVENTIVE MEDICINE.

Dr. Clarence R. Phillips, Harrisburg: The age incidence of contagious diseases shows them to be diseases of childhood. This is largely because of compulsory education, which brings all children of a community into close contact for five hours daily for five days weekly. Since compulsory education is a necessity, this problem of preventive medicine is distinctly "up to the State." The instrument for such protection in the present scheme of the State Department of Health is the county medical inspector. Parents must be educated, teachers must be instructed, and in some cases stern measures may be required to enforce the provisions of the new school code pertaining to communicable diseases. It has been suggested that instruction should be given teachers along the line of their duty in the prevention of disease.

Dr. Wilmer Krusen, Philadelphia, Director of Health: The laws regarding sanitation and quarantine represent the sentiment of the best men in the profession; I believe that county medical inspectors have a right to expect sincere coöperation in the stamping out of preventable diseases. No quarantine will be popular until we can develop a lay conscience, making the family realize that the rights of the individual cease where the rights of society begin. Until we develop the conscience of the practitioner who sees these cases in their incipiency we shall not eradicate communicable diseases. The matter is one of education rather than of legislation.

X-RAY EXAMINATION OF THE HEART AND GREAT VESSELS.

Dr. G. W. Grier, Pittsburgh: X-ray examination of the heart gives information concerning size, contour, location, pulsations, and the influence of respiratory movements upon that organ. The pulsations and the influence of respiratory movements are determined only by the use of the fluoroscope; the other facts, by radiogram or the fluoroscope. I have seen only two cases in which the heart was unquestionably too small for the performance of normal function. In each instance the organ was about the size of a base ball. The normal heart may vary in size between rather wide limits. The athletic heart is often hypertrophied. The small "drop" heart is supposed to indicate predisposition to tuberculosis of the lungs. In the large transverse heart its long axis is nearly at right angles to that of the body. I have fluoroscoped one case of heart block. The slow massive contractions of the left ventricle occurred about twenty times to the minute, while the rapidity of the contractions of the right auricle was extraordinary. The x-ray is of distinct advantage in considering the size and contour of the heart. In the differential diagnosis of aneurysm of the aorta and solid tumors in the mediastinum, both fluoroscope and radiograms should always be used.

American Medical Biographies

MUMFORD, JAMES GREGORY (1863-1914).*

JAMES GREGORY MUMFORD, of Boston, eminent as a surgeon and still more eminent as a writer, both upon pure surgery and upon a number of topics related to medicine, in lighter vein, was the son of George Elihu and Julia Emma Hills Mumford. He was born in Rochester, N. Y., in 1863 and died at Clifton, N. Y., October 18, 1914.

The Mumfords were of North of England stock, the first of the name settling at Newport, R. I., in 1655. The family subsequently moved to New London and Dr. Mumford's grandfather began the practice of law at Cayuga, N. Y., in 1795. In all these years the Mumfords were citizens of the best type, always prominent in local affairs and adding to their prestige by marrying into noteworthy New England families, such as the Winthrops, Dudleys, Saltonstalls, to whose influence may be attributed many of the qualities of the subject of this sketch.

Dr. Mumford prepared for college at St. Paul's School, Concord, an institution to which he was always intensely loyal and of which he eventually became a trustee. He entered Harvard as a member of the class of 1885 and graduated from the Harvard Medical School in 1890, serving as House Officer at the Massachusetts General Hospital in 1890-91. He had further admirable surgical training from acting as assistant for some years to the late Dr. M. H. Richardson. At college Dr. Mumford enjoyed life thoroughly and was by no means a "dig;" yet he gave abundant evidence of that bookishness that was so marked a characteristic of his later life. After the usual chances to show what was in him, offered by sundry out-patient appointments and as Surgeon at the Carney Hospital, he was taken into the staff of the Massachusetts General Hospital, and in due course of time rose to the position of visiting surgeon. His surgical work, while not of a pyrotechnic nature, was good work, tempered by remarkably sound judgment.

In 1892 he was very happily married to Helen Sherwood Ford of Troy, N. Y. There were no children.

As do most of the staff of the Massachusetts General Hospital, Dr. Mumford taught a certain number of the students of the Harvard Medical School. He enjoyed teaching, and apparently his students enjoyed being taught by him. While he was not one of the great teachers, it is very probable that had he risen above the rank of "Instructor" his success in this field would have been much greater, for he had the rare faculty of saying things in the way to make them remembered.

Thus far the record of Dr. Mumford's life is that of any successful surgeon. He had, however, other claims to our regard. The bookishness already hinted at felt the need of constant expression, and the dozen books and sixty or more medical articles he published in the course of twenty years attest sufficiently to the alertness of his mind. The wide range of his taste is shown by the titles of his best-known books: "Mumford Memoirs," "A Narrative of Medicine in America," "Clinical Talks on Minor Surgery," "Surgical Aspects of Digestive Disorders," "Surgical Memoirs and Other Essays," "Practice of Surgery," "One Hundred Surgical Problems," and "A Doctor's Table Talk." He edited the "Harvard Medical School: a History" (1905) with Dr. Thomas F. Harrington. Medical history appealed to him strongly, and besides sundry articles on bygone worthies, he wrote the chapter on the history of surgery in Dr. Keen's "System of Surgery." His more fugitive medical writings cover nearly the whole range of surgery. Dr. Mumford had none of the literary slovenliness so often found in medical writings. To him good style was quite as important as good matter, and he took extraordinary pains to use the right word. His style was alive and individual, a style one remembers with pleasure, a style that makes his "Practice of Surgery" read almost like a novel,—no mean achievement. As an example of his happy facility in using words, I will quote a few lines from a letter to his class secretary, written in 1910: "So the simple record runs on, telling of mild employments in the Harvard Medical School and elsewhere. I like teaching: students pass me out the usual compliments due to credulous senility (he was then 47). I like practising surgery; patients toss me roses mingled with thorns. I like writing about people and things, for the reviewers deal me comments which chasten the soul. Altogether, life continues a pleasant experience."

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*From the forthcoming "American Medical Biography" by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

But perhaps Dr. Mumford's greatest claim to be remembered is not for what he accomplished, but for what he hoped and tried to accomplish and did not, for many of the things he had most at heart are now being gradually worked out much as he hoped they might be. He was a man before his time and essentially a reformer; not of the irritating, aggressive type to whom we surrender out of sheer boredom, but the quiet persistent kind of man, who sees clearly what he feels ought to be done and keeps his goal steadfastly in mind, in spite of hostile criticism and constant failures.

He was firmly convinced of three things: first, that in many cases religion is quite as potent a remedial agent as is medicine, or rather that in many cases the clergyman might coöperate with the doctor to the manifest benefit of the patient. Hence he became closely identified with the "Emmanuel Movement," led by Rev. Elwood Worcester, a movement the success of which has been by no means commensurate with the hopes Dr. Mumford held. Now, however, that the fires of battle no longer rage, many of us are beginning to have a much more just view of what the movement stands for.

Secondly, as far back as 1906, he foresaw that the time was coming when great medical schools like Harvard should have professors whose chief business was to teach, and to whom teaching was not merely an incidental in a very busy life. The idea then seemed Utopian and Mumford was rather laughed at for entertaining it, yet now, after his death, it is in the way of accomplishment.

The third and probably most profound conviction in his life was that, while the rich and the very poor get good medical care, there is no provision under our modern conditions by which the man of slender purse, yet by no means a "charity patient," can obtain the services of really competent specialists. To this end in 1910 he devoted much thought and labor for the establishment of a fully equipped modern coöperative hospital for people of moderate means, of which he was to be the surgical head with Dr. R. C. Cabot in charge of the medical side, and under them a staff of good specialists. It was perhaps the deepest disappointment of Mumford's life that this scheme got no fruther than its prospectus. Undeterred, however, by this failure, he soon embarked upon a cognate undertaking of far more grandiose scope. Ill health rendered it necessary for him to resign from the Massachusetts General Hospital, and in 1912 he accepted an invitation to become physician in chief to the Clifton Springs (N. Y.) Sanitarium. Understanding that he was to be given a practically free hand, he set about gathering around him a body of brilliant, well equipped younger men, hoping to change the time-honored Sanitarium from a resort more or less for valetudinarians into an actively constructive institution, not for the very rich, perhaps, but primarily for the only moderately well-to-do, where at no ruinous expense they could command the very best medical care. Differences of opinion as to policies led, however, to his resignation some two years later, with his dream only partly realized. Meanwhile, during his short stay at Clifton he had made a host of friends, and his appointment as trustee of Hobart College is only a token of the esteem in which he was held in Western New York.

I have referred to Dr. Mumford's bad health. The last dozen years of his life were one constant struggle with a failing heart, under stress that most men would have accepted as a stern warning that it was time to retire. After each bout with his enemy, Mumford returned to the fray with indomitable hope and enthusiasm. Such a gallant struggle against pitiless odds is seldom recorded.

Dr. Mumford was a member of the various medical societies to which most of us belong, and although he much preferred his own fireside he was a member of the Somerset and other good social clubs, while his interest in his fellow men led him to join the Economic Club, the Reform Club, and other similar bodies identified with civic uplift. His historical tastes naturally led him into the Society of Colonial Wars.

Malcolm Storer, M.D.

Data have been obtained from classbooks of the Class of Harvard, 1885, from an Appreciation by Dr. Richard C. Cabot, published in the Boston Medical and Surgical Journal of April 1, 1915, and also from what the writer very vividly remembers of a dear friend.

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SPURZHEIM AND PHRENOLOGY.

About a century ago, considerable interest was aroused by the work and teachings of Dr. Spurzheim, whose investigations in phrenology caused many people of his generation to believe this subject a promising field of scientific activity. There has recently been received a letter containing reminiscences about Spurzheim which may be of interest to the profession. The esteem in which he was held is denoted by the following extract:

"In my father's day the doctors were enthusiastic over Dr. Spurzheim from Vienna, and spoke as if his name would always be remembered. Nahum Capen wrote an interesting account of Spurzheim, and his visit to Boston and death there."

This biography describes Spurzheim's life, purpose, and achievement. He was born on December 31, 1776, in Longvick, a little town on the Moselle River, in territory under Prussian domination. He received his college education at Treves, and later studied medicine in Vienna, where he came under the influence of Dr. Gall, the founder of phrenology. In 1813, he received his degree of M.D. in Vienna. He then went to England and Scotland, where his theories were bitterly criticized and ridiculed, until his lectures on anatomy and the functions of the brain and its connection with mind made phrenology a topic of public interest.

In 1817, Spurzheim published a book on *Insanity*, which presents the author's theories on deranged mental conditions. He considers the disorders of the external functions of the mind—voluntary motion and the five senses—and the internal manifestations or diseases of the brain. The main portion of the book deals with insanity. Spurzheim enumerates various symptoms and describes in detail many forms of insanity. He reports conditions discovered during his investigations and offers suggestions for treatment by both moral and medical means. He emphasizes the cruelty of treating insane persons as prisoners, and discusses the relative values of coercion, occupation, and personal interest.

Spurzheim went to Paris in 1817 and made his permanent home there. His teaching was for a time severely ridiculed; but his perseverance and earnestness temporarily gave to phrenology the status of a reputable science. While in Paris, Spurzheim also practised medicine, but this was never his favorite occupation. In 1825, Spurzheim returned to London, where his subject was then treated with respect and candor, and his views generally accepted by the public. Medical journals commented favorably upon his works and phrenological societies were formed in both England and Scotland.

At this time, Spurzheim published several books in English. One of these, "Phrenology in Connection with the Study of Physiognomy," to which Nahum Capen later prefixed his biography of Spurzheim, sets forth Spurzheim's doctrines of phrenology. The first part of the book is divided into two sections; in the first, he makes observations on bodily configuration and organic constitution generally, in connection with adaptation to peculiar functions; on the difference in heads and faces of individuals whose characters are opposed to each other; and on the difference between heads of the sexes and of various nations. Illustrations are given of immoral and moral, religious, independent, ambitious, humorous, timid, bold, and prudent persons. In the second part of the book, Spurzheim compares the characters and accompanying cerebral organizations of numerous types.

In 1832, Spurzheim visited the United States, with two objects: 1, To study the genius and character of our nation; 2, to propagate his doctrines of phrenology. The subject was new to the United States; so far as it had become known it was perverted and misunderstood. Spurzheim visited New York, Hartford, and Boston, and everywhere he delighted his audiences. In Boston he gave lectures on the anatomy of the brain which excited wide and lively interest. Many persons who attended at first to collect material for ridicule and amusement became converted to his ideas. Spurzheim visited our institutions of beneficence, prisons, and schools. His activities resulted in overexertion, and he died in Boston on November 10, 1832. The letter previously quoted contains, also, the following account of the funeral:

"It seems the funeral was held in the Old South Church, with about three thousand present, and hundreds turned away. The Boston Medical Association accompanied the casket to the church. There was a dirge on the organ by Zeuner, prayer by Reverend Joseph Tuckerman, oration by Professor Follen, and an ode by Reverend John Pierpont, sung with great effect by the Händel and Haydn Society."

Spurzheim's death caused universal and sincere feeling of grief throughout Boston, and was regarded as a public calamity. On November 17, several of Spurzheim's friends agreed to organize the Boston Phrenological Society, for the purpose of investigating the principles of phrenology. Nahum Capen gives the following estimate of Spurzheim's character:

"Regarding Dr. Spurzheim as a man, we find all that dignifies and adorns the human character. He was distinguished for his superior mind, and his meek and amiable manners. He was kind and affectionate to his friends, and charitable to his opponents. He was liberal, prudent and industrious. His benevolence was not of a limited character, having motives of selfishness for its origin, but extending to the whole family of man."

PALEONTOLOGY AND MEDICAL HISTORY.

The relation of paleontological data to medical history presents a subject of interest to the profession. An article published in a recent issue of *Science* discusses the evidence which these prehistoric remains afford in relation to diseases of the present day. Pathological lesions, especially those of the bones, have retained their characteristics for thousands of years, and give distinct evidences of disease as far back in geological time as the Carboniferous. Reasoning from the theoretical aspects of paleopathology, on the basis of possible parasitism of early hosts, disease may have originated in the Archeozoic, but there is no definite recorded evidence prior to the Pennsylvanian.

These ancient lesions, which paleontologists have mentioned only incidentally, are of extreme importance in tracing the origin and antiquity of phenomena which are vitally important to humanity today. That the study of these evidences may aid in the solutions of problems which are at present not solved is evident when we consider that many epidemics which sweep the world, such as the one just past, are doubtless the result of an accumulation of changes over a long period of time. It is well known in medical history how whole populations have been swept away by scourges which, had the people understood them, could have been avoided; and in the future, when we come to understand all of the events of past history, we may be better prepared to avoid future conditions of similar nature.

The careful description, illustration, and study of ancient cases of fracture, of diseased bones, or any evidences of pathology is desirable and will advance the study of paleopathology. Evidences of disease may be detected in the positions assumed by animals at death. The Mesozoic fracture extends the medical student's knowledge of traumatism. Other questions, such as the relation of disease to extinction, the part disease has played in the evolution of forms, whether retarding, changing, or ending their development, may be solved eventually by the data which are being collected by paleontologists.

DEATH OF A ZEALOUS PUBLIC HEALTH WORKER.

There are many in Boston and Massachusetts who will learn of the death of Edward A. Ingham, M.I.T., '14, with painful surprise. He was a native of Topeka, Kansas, identified while in this State with a number of public-spirited health movements. He was a graduate of Washburn College at Topeka, and on the occasion of the well-known investigation of eggs in Kansas that was conducted by Dr. W. T. Sedgwick and his assistants, he became interested in the matter, and later came East to study at the Institute. Following graduation, he was appointed assistant in the department of biology and research, assistant in the sanitary research laboratory. He was advanced to instructor and research associate in 1914 and remained with Technology until 1917.

Concerning his assistant and fellow worker, Dr. Sedgwick notes that he was a hard worker, a good investigator, and a first rate teacher. He had high standards and lived up to them. He was full of energy, aggressive, ambitious, and able. We were sorry when he left the Institute to accept the responsible position of district health officer of the State Board of Health of California.

While in Boston, Mr. Ingham conducted for the M. I. T. Sanitary Research Laboratory an investigation of Massachusetts rural health conditions and the activities of local boards of health. He managed for the Public Health Committee of the Massachusetts Medical Society a public health school for health officers, the first of its kind in Massachusetts.

His last letters to Boston indicate the severity of the influenza situation in California, and it was in his work of combating the dread disease that he was himself stricken and died.

Dr. Sedgwick characterizes the death of Mr. Ingham as not only a loss to his friends, but a calamity to public health work, since without medical degree he had made for himself, through his engineering abilities, an enviable name and station.

$10,000 Gift to Holyoke Hospital.—$10,000 has been given to the Holyoke City Hospital for the establishment of a children's ward.

INFLUENZA EPIDEMIC IN THE UNITED STATES.

It is impossible to estimate exactly the prevalence of influenza in the United States because the reporting system, in many instances, has been inadequate. The Public Health Service has collected most of the information which is now available, and the report issued for December 27 reviews the conditions of the epidemic.

The epidemic became nation-wide in four or five weeks after it appeared in epidemic form in the first localities which were affected. It is believed that sources of infection were well distributed in the largest cities some time before the disease became epidemic. The diseases reached the epidemic stage at about the same time in all parts of the country; the noticeable radial spread of influenza confirms this hypothesis. A total of nearly 350,000 deaths have been reported. In comparing mortality rates for various localities, it has been found that there has been no definite relation between the mortality rate and the size of the locality. As a rule, as the epidemic spread, its severity decreased. The course of the epidemic has naturally varied in different cities; this variation has depended upon such conditions as the occurrence of previous epidemics of similar or related diseases, the type of the locality, the composition of the population, and the methods adopted for controlling the epidemic.

The field studies in Baltimore show that the case incidence of the disease was high in all ages up to 45, while the fatality rate was very low in school children and relatively low among persons from 45 to 60 years of age.

MEDICAL NOTES.

Influenza in Italy.—A report from Italy states that there have been 800,000 casualties in the present influenza epidemic in Italy.

Army Health Conditions.—Health conditions in the army at home showed continued improvement during the week ending January 3. Influenza and pneumonia are still on the decline. Only two camps, Camp Travis and the port of embarkation, Hoboken, reported more than 100 new cases of influenza for the week.

The War Department summary for January 10 showed 359 new cases of pneumonia among approximately 600,000 troops. Hospital admission and non-effective rates generally were lower than in the preceding week, with 197 deaths from all causes.

RED CROSS HOSPITAL AT ARCHANGEL.—A base hospital of 100 beds has been established at Archangel by the American Red Cross. Eighty patients, almost all of them Americans, are already receiving treatment.

RED CROSS MEMBERSHIP.—The Red Cross Roll Call in New England up to January 1 shows an adult membership of 1,525,140. With a junior membership of 600,000, this gives New England a total of 2,125,140—the largest organization ever known in this section of the country. The complete returns will not be available for a week or more. On the returns so far, Maine has 138,800; New Hampshire, 121,000; Vermont, 85,000; Massachusetts, 1,038,340; and Rhode Island, 142,000.

The membership last year, exclusive of juniors, was 1,145,500.

THE BRITISH MEDICAL RESEARCH COMMITTEE.—In a recent issue of *Science*, the following note on the activities of the British Medical Research Committee has been published.

"The committee has acted jointly with various government departments or other bodies, either in appointment or in nomination, with a view to meeting particular administrative needs demanding research work. The committee has a number of special committees, including those on the incidence of phthisis in relation to occupation; on surgical shock and allied conditions; on the standardization of pathological methods; on salvarsan; on chemical warfare medical investigations; on anaërobic bacteria and infections; on accessory food factors ('vitamines'); on air medical investigations; and on dysentery. There is also an industrial fatigue research board, appointed last June by the Department of Scientific and Industrial Research jointly with the Medical Research Committee, to consider and investigate the relations of the hours of labor and of other conditions of employment, including methods of work, to the production of fatigue, having regard both to industrial efficiency and of the preservation of health, among the workers.

"Cordial coöperation has been received from the Advisory Council of Scientific and Industrial Research, established in 1915. The field of research in every pure science, not less than that of inquiry in industrial science, lies so close at very many points to the fields of medical research, that no boundary line can be drawn. The committee looks forward to the progressive development in this coöperation with the department of scientific and industrial research, and finds new hope for the increasing effective organization of research work in all directions."

INFLUENZA IN INDIA.—Influenza has been prevalent in India. The number of deaths in the Punjab is estimated at 250,000. When the final results of the epidemic are summed up, it will probably be found that other provinces have suffered on approximately the same scale. No part of the country seems to have escaped, although the visitation was lightest in Bengal, and even the dry and bracing Himalayan tracts are reported to have been severely attacked. The population of the Punjab and the Punjab native states is about 24,000,000, and of the whole of India about 315,000,000. If the influenza death rate proves as heavy throughout India as in the Punjab, this would give a total death roll of over 3,000,000. It is planned to establish a Medical Research Institute in Bombay on the lines of the Rockefeller Institute to which large donations have already been promised.

AWARD OF THE PERKIN MEDAL OF THE AMERICAN CHEMICAL SOCIETY.—The Perkin medal of the American Chemical Society has been awarded to Dr. F. G. Cottrell, of the U. S. Bureau of Mines, for his work on electrical precipitation.

HONOR FOR AMERICAN PHYSICIAN.—Dr. Livingston Farrand, president of the University of Colorado and of the Rockefeller Anti-tuberculosis Commission, has been named an officer of the Legion of Honor on the proposal of Captain André Tardieu, French high commissioner to the United States.

THE YELLOW FEVER EXPEDITION OF THE ROCKEFELLER FOUNDATION.—Dr. George R. Vincent, president of the Rockefeller Foundation, has announced that with the cessation of hostilities in France the Foundation will renew its peace activities. Its international health board will renew at once, in coöperation with local authorities in South and Central America, its combat against yellow fever. Dr. William C. Gorgas, retired Surgeon General, will direct the work. Dr. Vincent is reported to have issued the following statement:

Dr. Gorgas will sail within a short time for Central and South America. Dr. N. E. Connor has already preceded him to Guayaquil, on invitation of the government of Ecuador. He will guide the local operations, which will be done by men appointed by the local authorities.

The program which General Gorgas will now actively develop, results from a study of the yellow fever problem by the International Health Board, which began its labors in July, 1914.

The opening of the Panama Canal, with the establishment of new world trade routes, brought the danger of a wide distribution of yellow fever. Its appearance in Asia, for example, would be a catastrophe.

To obtain authoritative information and counsel, the board appointed a yellow fever commission, headed by General Gorgas. Associated with him were Dr. Henry R. Carter, of the United States Public Health Service; Dr. Juan Guiteras, chief health officer of Havana; Major T. C. Lyster and Major E. R. Whitmore, of the Medical Department, United States Army, and Mr. W. D. Wrightson.

To define the problem accurately, the commission, in the spring and summer of 1916, visited all countries in South America in which yellow fever had appeared in recent years. On its return it presented a report, expressing the opinion, in which all members of the commission concurred, that the total eradication of yellow fever was feasible.

In January, 1917, the board adopted a working program and appointed Dr. Gorgas director. The Secretary of War had agreed to release the surgeon general for this service, but the war compelled a postponement of the work which is now to be resumed.

South Baltimore General Hospital.—At the recent opening at the South Baltimore General Hospital Dr. Llewellys F. Barker, of the Johns Hopkins University, and Dr. Jane E. Nash, superintendent of the Church Home and Infirmary, made the principal addresses.

New York Academy of Medicine.—The anniversary address of the New York Academy of Medicine was delivered on December 5, by Edwin G. Conklin, professor of biology in Princeton University, on "The Biology of Democracy with Special Reference to the Present World Crisis."

Chair of Medicine in the University of Belgrade.—Over £2,500 of the £12,000 required has been subscribed to the chair of medicine which is to be established in the University of Belgrade, as a memorial to D. Elsie Ingles.

Rhode Island Medical Society.—At the annual meeting of the Rhode Island Medical Society, the trustees of the Fiske Fund proposed the following subject for the prize essay for 1919: "Recent Classification and Treatment of Pneumonia." The prize for the best essay is $200. Each competitor must forward to the secretary of the trustees, on or before May 1 of the year of the competition, a copy of his dissertation. The trustees are Drs. Gardner T. Swarts, John M. Peters, and Jesse E. Mowry, all of Providence. Dr. Peters is secretary.

McClenathan Hall of Science.—By the will of the late Dr. John C. McClenathan, Connellsville, practically his entire estate, valued approximately at $160,000, will be left, after the death of his widow, to Washington and Jefferson Colleges, to erect a building to be known as the McClenathan Hall of Science.

The Loyola University School of Medicine.—The Loyola University School of Medicine has recently been reorganized. The buildings and equipment of the Chicago College of Medicine and Surgery were purchased in September, 1917, making an important addition to the resources of the school. In the department of anatomy Dr. R. M. Strong, professor of anatomy at Vanderbilt University Medical School, has been appointed professor and head. Dr. Thesle T. Job has been made assistant professor of anatomy.

Influenza in Motor Transport Corps.—On January 14, three cases of influenza were reported in the Motor Transport Corps.

Influenza in Maryland.—Since January 1, 18,496 cases of influenza have been reported to the Maryland Board of Health. For the entire month of December 13,000 cases were reported. In spite of these figures, the health officials have determined not to close schools and theatres, but to impress upon the public the necessity of coöperation in eliminating the disease.

In the City of Baltimore, 105 influenza cases and 5 deaths, with 14 deaths from pneumonia, were reported on January 13, for a 48-hour period.

INTER-ALLIED FELLOWSHIP OF MEDICINE.—Post-graduate courses in medicine, similar to those already established in Paris, will soon be inaugurated in London for American and Dominion army medical officers. In the opinion of the London *Times* this will tend to draw more closely together allied schools of medicine.

HEALTH SUNDAY, FEBRUARY 9.—Dr. Rupert Blue, Surgeon General of the Public Health Service, has issued a proclamation to the ministers of the country asking them to set aside Sunday, February 9, as health Sunday, and to preach sermons on that day emphasizing the duty of the nation to protect returning soldiers and sailors and the community in general from social diseases.

"The Government of the United States is asking the churches of the country to take an active part in meeting a great national emergency.

"The war made it necessary for the nation to face frankly and courageously the menace of venereal diseases. Now the war is over and the period of demobilization has begun, drastic measures must be taken to prevent, during this period, those conditions in civilian life which made these diseases the greatest cause of disability in the army.

"In the army and navy a program of law-enforcement, medical measures, education, and provision for wholesome recreation was adopted. This program brought results. The venereal rate was lowered below that of any army of any nation in the history of the modern world.

"Now that the war is over, the cities and towns through which the soldiers and sailors will go and to which they will return upon demobilization must be made as safe as the camps from which they have come. The fight against this menace to our national vitality and to our homes must be vigorously continued.

"It is the social responsibility of the communities of which the churches of every denomination are a part, to continue the work carried on in time of war in order that the world may be made safe, not only for democracy, but for posterity."

EXPERIMENTS WITH POLYNEURITIS.—The relation between dietary deficiences and disease presents a problem of increasing interest. Experiments with animals have proved that certain diseases, of which beriberi is the best known example, are due to the absence from the diet of some definite substance which is essential for normal nutrition. A recent report issued by the Public Health Service gives the results of attempts made to produce polyneuritis in laboratory animals. Polyneuritis has been produced in cats and dogs by means of an exclusive dietary of lean beef which was heated for three hours at 120° C. in the presence of alkali. The animals showed a diminution of appetite, constipation, loss of body weight, weakness, and sometimes drowsiness, followed by paralytic symptoms, tonic convulsions, spasticity of certain groups of muscles, and disturbances of the circulation and respiration. It was discovered that the oral administration of active preparations of the antineuritic substance of yeast to paralyzed animals caused the symptoms to disappear.

ANTIVENEREAL CAMPAIGN.—The United States Public Health Service Report, issued for January 3, contains a report of the antivenereal campaign which is being conducted throughout the country. Under the Chamberlain-Kahn Act, provision is made for Federal aid in this work in states complying with certain conditions. The Division of Venereal Disease, in conjunction with State boards of health, is conducting, at present, approximately 125 clinics. Additional facilities are needed to treat the increased number of cases which are being reported each month. The Division is conducting 25 clinics in conjunction with the Red Cross, in extra-cantonment zones. Social service and follow-up work is carried on by all these clinics. In addition, educational work, including pamphlets, exhibits, conferences for educators, and lecture tours, is being broadened constantly.

During the period of reconstruction, efforts to control venereal disease will be intensified. The entire area of the United States will be covered by a coöperative campaign, in which national, state, and local agencies will coöperate.

FACILITIES FOR TREATMENT OF TUBERCULOSIS.—Statistics show that the entire number of beds for tuberculous patients in the United States at the present time does not exceed 60,000. It is estimated that there are at least 2,000,000 active cases of this disease in the country. The problem which would arise if only one-tenth of this number of persons should wish to avail themselves of hospital treatment during the coming year is one which the anti-tuberculosis organizations are trying to solve.

MEDICAL SERVICE IN WESTERN SIBERIA.—There is urgent need for doctors, nurses, and medical supplies in Western Siberia. Dr. Arthur Rudolph Teusler, head of the Czecho-Slovak medical service, believes that the spread of typhus and the arrival of 200,000 Russian soldiers, formerly imprisoned in Austria and Germany, will tax every agency to the utmost. He directed the establishment of Red Cross hospitals at Omsk, Ekaterinburg, Tcheliabinsk and Tiuman. The public bathhouse at Ekaterinburg has been converted into a typhus hospital. It is probable that Russian prisoners will continue to return to Western Siberia for at least two months.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending January 18, 1919, the number of deaths reported was 395 against 306 last year, with a rate of 25.86 against 20.29 last year. There were 47 deaths under one year of age against 35 last year.

The number of cases of principal reportable diseases were: Diphtheria, 67; scarlet fever, 38; measles, 11; whooping cough, 25; typhoid fever, 2; tuberculosis, 61.

Included in the above, were the following cases of non-residents: Diphtheria, 4; scarlet fever, 9; tuberculosis, 1.

Total deaths from these diseases were: Diphtheria, 3; scarlet fever, 2; typhoid fever, 1; tuberculosis, 25.

Included in the above, were the following non-residents: Diphtheria, 2: scarlet fever, 2; tuberculosis, 1.

Influenza cases reported, 1,127; influenza deaths, reported, 130, of which 16 were non-residents.

INFLUENZA IN BOSTON AND MASSACHUSETTS.—On January 10, 23 deaths from influenza were reported to the Boston Health Department; on January 11, the number of deaths increased to 28. These figures show a decrease in the mortality rate; for, during the preceding week, the number of deaths reported daily averaged 35.

On January 12, 210 new cases of influenza were reported to the Boston Health Department. To the State Department of Health, 966 new cases were reported, with 29 deaths from influenza and pneumonia. The following reports, in several instances covering more than one day, were received from various cities and towns:

Boston, 210; Medford, 54 (two days); Revere, 52 (eight days); Worcester, 43 (several days); North Andover, 41 (one month); Cambridge, 39; Somerville, 37; Newton, 36; New Bedford, 36; Quincy, 33; Haverhill, 26; Lawrence, 26; Lowell, 25; Chelsea, 19; and Holden, 13.

Dr. Woodward, Boston Health Commissioner, has reported that the daily death rate from pneumonia for last week was 6.7; while during the same week last year, when there was no epidemic, it was 8.7.

One hundred and seventy new cases of influenza and 21 deaths, and 7 deaths from lobar pneumonia, were reported in Boston on January 13. On January 14, new cases of influenza numbered 173, with 19 deaths, and 6 deaths from lobar pneumonia. To the State Department of Health, 1,161 new cases and 46 deaths were reported.

On January 15, 182 new cases of influenza and 23 deaths, with 25 new cases of lobar pneumonia and 4 deaths, were reported to the Boston Health Department. Reports from 61 cities and towns include 861 cases of influenza and 31 deaths. New Bedford reported 9 deaths; Cohasset, 2; Springfield, 1. Other reports include:

Worcester, 58 (several days); Brockton, 44 (two days); Somerville, 44; Haverhill, 35; Beverly, 34; Fall River, 25; Newton, 24; Weymouth, 23 (two days); Lawrence, 23; Lowell, 22; Cambridge, 21; Winchester, 21 (five days); and Springfield, 20.

The total number of new cases reported to the State Department was 861, 300 less than the number reported for the 24 hours preceding.

On January 16, 150 new cases of influenza and 1 of lobar pneumonia, with 26 deaths from influenza and 6 from pneumonia, were reported to the Boston Health Department. Commissioner Woodward of Boston is reported to have said that "while the daily fluctuations in reported cases of influenza are not sufficiently pronounced to indicate an abrupt cessation of the epidemic, it is evidence that the prevalence of the disease has been steadily declining for the past two weeks. As death may not occur until patients have been sick a week or more, it is not surprising that deaths have not yet shown a reduction proportionate to the decrease in reported new cases. Furthermore, it is to be remembered that we are entering a season of the year when deaths from respiratory diseases in Boston always increase."

The following reports were received from various cities and towns:

Fall River, 19; Brockton, 28; Cambridge, 29; Milton, 14 (in three days); North Attleboro, 35 (two days); Quincy, 27; Everett, 19; Haverhill, 26; Lynn, 21; Acton, 11; Arlington, 11; Concord, 56 (in seven days); Lawrence, 18; Lexington, 11; Lowell, 28; Waltham, 59 (two days); Newton, 10; Worcester, 39; Clinton, 12 (three days); Fitchburg, 33 (five days); Leominster, 28; Springfield, 5.

No cases of influenza were reported to the Northeastern Department, either among officers or men.

On January 17, 191 new cases of influenza and 14 of lobar pneumonia were reported to the Boston Health Department. There were 10 deaths from lobar pneumonia.

The State Department reported 785 cases and 25 deaths from 57 cities and towns. Cities reporting more than 25 new cases were: Fall River, 27 cases and 2 deaths; New Bedford, 41 cases and 1 death, in two days; Cambridge, 28 cases; Malden, 39 cases; Lowell, 31 cases, and Worcester, 29 cases.

On January 18, 175 new influenza cases, with 14 deaths, and 5 new cases of lobar pneumonia and 9 deaths from this cause, were reported to the Health Department of Boston. Despite the increase shown in these figures, Dr. Woodward is reported to have stated that the pneumonia record for the current week, 42, is way below that of the corresponding week, last year, 61.

During the week ending January 18, there were reported 1,127 new influenza cases, against 1,635 during the previous week; and there were 130 deaths from influenza reported, against 190 the week before.

The number of deaths reported on January 18 to the State Department numbered 14, and the number of new cases of influenza, 835. Among the new cases were: Worcester, 41; Somerville, 38; Malden, 37; Newton, 29 (two days); Barre, 26 (two days); Cambridge, 26; Fall River, 24; Chelsea, 21; and Scituate, 19.

There were 87 influenza cases, with 12 deaths, and 6 new cases of lobar pneumonia and 4 deaths, reported to the Boston Health Department on January 19. On January 20, 112 new cases of influenza, with 17 deaths, and 5 cases of pneumonia, with 4 deaths, were reported.

Reports made to the State Department of Health on the influenza epidemic show a continued decrease throughout the State, with but one exception, the City of Lowell, which shows a large increase in new cases. The following reports have been submitted from different cities and towns:

Lowell, 52; Worcester, 38; New Bedford, 34; Quincy, 29; Somerville, 28; Fall River, 25; Cambridge, 23; Brookline, 22; Waltham, 22 (two days); and Lawrence, 15.

Influenza at Women's Reformatory, Sherborn.—At the Women's Reformatory in Sherborn so many inmates are ill with influenza or pneumonia that physicians and nurses from Boston, Worcester, and other places have been called to help attend the patients. There have been eight deaths. As a precautionary measure, the women who have escaped the disease have been given increased yard liberty. There are 400 inmates in the institution.

Campaign of the District Nursing Association.—The Hyde Park division of the District Nursing Association is conducting a campaign to raise $12,000, in order to pay the debt contracted during the recent epidemic. During the past year, 24,795 local visits have been made by the Association.

Major Allan S. Kirkwood.—Major Allan S. Kirkwood, Medical Corps, of Newton Center, has been assigned as chief of the Medical Service at United States Army General Hospital No. 31, Carlisle, Pa.

Nomination of Dr. Balmer.—Dr. Edward Balmer of Northbridge has been nominated medical examiner of the 7th Worcester District, to succeed Dr. William L. Johnson, who has resigned.

In Massachusetts the problem is partly solved through the Central New England Sanatorium at Rutland. This is the second best place in the East as a health centre and is not surpassed by any other state in capacity for treatment. It is believed that after the new buildings at Rutland are completed, Massachusetts will face its tuberculosis reconstruction problem with an equipment equal to that of any state in the Union.

MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE.—The annual conference of the Massachusetts Society for Mental Hygiene was held in Boston on January 16. At the afternoon session, Hon. Frederick P. Cabot presided. The following addresses, dealing with mental hygiene, war, and education, were delivered: 1, "The Need and Opportunity for Mental Hygiene as Shown by the War," by Major Frankwood E. Williams, Medical Corps, U. S. A.; 2, "The Need for Instruction in Mental Hygiene in Medical, Law, and Theological Schools," by H. Douglas Singer, M.D., Illinois State Psychopathic Institute; 3, "The Smith College Experiment in Training for Psychiatric Social Work," by W. A. Neilson, LL.D., president of Smith College.

Professor William H. Burnham presided at the evening session, when mental hygiene and the education of the young was considered in the following addresses:

1. "Methods of Developing Mental Hygiene in the Public Schools," by Arnold Gesell, M.D., Yale University.
2. "Facts of Mental Hygiene that Teachers Ought to Know," by Walter F. Dearborn, M.D., Harvard University.
3. "Nervous Children and Their Training," by C. Macfie Campbell, M.D., Johns Hopkins University.

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The Massachusetts Medical Society.

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1918-1919.

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Correspondence.

QUARANTINE OF RETURNING TROOPS.

483 Beacon Street, Boston, Jan. 16, 1919.

Mr. Editor:—

Since it is an established fact that the first outbreaks of the so-called influenza epidemic occurred among the naval forces, and since the reappearance of this epidemic was observed with each incoming transport of returning soldiers, it is a puzzle to me why the health authorities and the other "powers that be" do not quarantine all returning sailors and soldiers and thus employ the most effective means in checking the epidemic at its source of origin.

Yours truly,

M. J. KONIKOW.

RECENT DEATHS.

DR. CHAUNCEY M. MARSTIN died recently at his home in Braintree.

DR. WILLIAM B. VAN LENNEP, dean of Hahnemann Medical College, in Philadelphia, died there recently after an illness of two months. Dr. Van Lennep was sixty-five years old.

MAJOR ROBERT L. HULL, U.S.A., died recently in San Francisco, Cal., at the age of forty-three. Dr. Hull was a graduate of Bowdoin College in the Class of 1897. At one time he was city physician of Portland, Me., his native city, and for nine years before his entrance into army service last June, he had practised surgery in Oklahoma City.

DR. HARRY P. CORLISS died on November 16, of pneumonia, at Ray, Arizona, at the age of thirty-two years. Dr. Corliss was formerly an industrial fellow in the Mellon Institute of Industrial Research.

DR. FRANK AMON died of pneumonia at Souilly, France, on October 12. Dr. Amon was a research fellow in the Mellon Institute. In 1917 he enlisted in the United States Gas Defense work.

DR. REGINALD PERCY COCKIN, assistant helminthologist of the London School of Tropical Medicine, died on December 9, in his fortieth year.

DR. GUSTAVE BOUCHARDAT, Professeur Agrégé in the Paris medical faculty and honorary professor in the school of pharmacy, died recently, at the age of fifty-four years. Dr. Bouchardat has been a member of the Académie de Médicine, section of physical and medical chemistry, since 1882.

DR. ALBERT A. MACKEEN was killed in an automobile accident on January 18. Dr. MacKeen was born in Nova Scotia sixty-five years ago. He graduated from Bellevue Hospital and practised medicine in Whitman for nearly forty years. He was a member of the Massachusetts, Plymouth County and the Hapherly medical societies.

LT. PAUL CARROLL DENNETT of the Medical Corps, died in France on October 16. Dr. Dennett received his commission in January, 1918. In June, he was called to active service and was stationed at Camp Hancock, Ga., and later at Fort Screven, Ga., where he was attached to the 75th C. A. C. as battalion surgeon. He sailed for France on October 4 and became ill with influenza during the voyage. On his arrival in France he was removed to Base Hospital No. 65, near Brest, where he died.

DR. THOMAS F. HARRINGTON, Deputy Health Commissioner, died recently of ptomaine poisoning at his home in Boston. At one time Dr. Harrington was director of school hygiene in the Boston schools.

DR. JOHN W. SAWYER died at his home in Dexter, Maine, on January 22. Dr. Sawyer was born in Monmouth. At one time he was medical examiner for Penobscot County.

DR. JOHN H. LOWMAN of Cleveland, who headed the first American Red Cross tuberculosis mission to Italy, died at the New York Hospital, on January 23. He became ill in Italy and returned to America on a steamship which arrived in New York a few days before his death.

DR. CLARENCE JOHN BLAKE died at his home in Boston, January 29, aged 75 years. He had been a member of the Massachusetts Medical Society since 1868. He never held office in the Society.

DR. WALTER GREENOUGH CHASE died at his home in Boston, January 27, aged 59 years. He was a graduate of Harvard College in the class of 1882, and of Harvard Medical School in 1901. He is survived by his widow, who was Fannie Scott Hubbard of Charleston, S. C., and by a son and a daughter.